

2014-017209

SW135



Utah Class IV and VI Landfill Permit Application Form
Utah Division of Solid and Hazardous Waste
Solid Waste Management Program

Mailing Address
P.O. Box 144880
Salt Lake City, Utah 84114-4880

Office Location
288 North 1460 West
Salt Lake City, Utah 84116

Phone (801) 538-6170
Fax (801) 538-6715
www.deq.utah.gov

APPLICATION FOR A PERMIT TO OPERATE A CLASS IV OR VI LANDFILL

Please read the instructions that are found in the document, INSTRUCTIONS FOR APPLICATION FOR A PERMIT TO OPERATE A CLASS IV or VI LANDFILL. This application form shall be used for all Class IV or VI solid waste disposal facility permits and modifications. Part I, GENERAL INFORMATION, must accompany a permit application. Part II, APPLICATION CHECKLIST, is provided to assist applicants and, if included with the application, will assist review. **Please note** the version date of this form found on the lower right of the page; if you have received this form more than six months after this date it is recommended you contact our office at (801) 538-6170 to determine if this form is still current. When completed, please return this form and support documents, forms, drawings, and maps to:

Dennis R. Downs, Director
Division of Solid and Hazardous Waste
Utah Department of Environmental Quality
PO Box 144880
Salt Lake City, Utah 84114-4880

(Note: When the application is determined to be complete, submittal of two copies of the complete application will be required.)

RECEIVED

UTAH DIVISION OF
SOLID & HAZARDOUS WASTE

Utah Class IV and VI Landfill Permit Application Form

Part I General Information APPLICANT: PLEASE COMPLETE ALL SECTIONS.									
I. Landfill Type		<input type="checkbox"/> Class IVa <input checked="" type="checkbox"/> Class IVb <input type="checkbox"/> Class VI		II. Application Type		<input type="checkbox"/> New Application <input checked="" type="checkbox"/> Facility Expansion <input checked="" type="checkbox"/> Renewal Application <input type="checkbox"/> Modification			
For Renewal Applications, Facility Expansion Applications and Modifications Enter Current Permit Number <u>9704</u>									
III. Facility Name and Location									
Legal Name of Facility Moab Class IV Landfill									
Site Address (street or directions to site) 1000 East Sand Flats Road						County Grand			
City Moab			State UT		Zip Code 84532		Telephone 435-259-3867		
Township 26 S		Range 22 E		Section(s) 5 & 6		Quarter/Quarter Section NW ¼		Quarter Section SW ¼	
Main Gate Latitude degrees minutes seconds				Longitude degrees minutes seconds					
IV. Facility Owner(s) Information									
Legal Name of Facility Owner Grand County Solid Waste Management Special Service District #1									
Address (mailing) PO Box 980									
City Moab			State UT		Zip Code 84532		Telephone 435-259-3867		
V. Facility Operator(s) Information									
Legal Name of Facility Operator Same as Facility Owner									
Address (mailing)									
City			State		Zip Code		Telephone		
VI. Property Owner(s) Information									
Legal Name of Property Owner same as Facility Owner									
Address (mailing)									
City			State		Zip Code		Telephone		
VII. Contact Information									
Owner Contact Thomas Edwards					Title District Manager				
Address (mailing) PO Box 980									
City Moab			State UT		Zip Code 84532		Telephone 435-259-3867		
Email Address gcswmss@yahoo.com					Alternative Telephone (cell or other)		435-260-9978		
Operator Contact same as Owner Contact					Title				
Address (mailing)									
City			State		Zip Code		Telephone		
Email Address					Alternative Telephone (cell or other)				
Property Owner Contact same as Owner Contact					Title				
Address (mailing)									
City			State		Zip Code		Telephone		
Email Address					Alternative Telephone (cell or other)				

Utah Class IV and VI Landfill Permit Application Form

Part I General Information (Continued)			
VIII. Waste Types (check all that apply)		IX. Facility Area	
<input type="checkbox"/> Landfill will accept all wastes allowed in Class IV or VI landfills Or landfill will accept only the following wastes		Facility Area..... <u>50</u> acres Disposal Area..... <u>20</u> acres Design Capacity Years..... <u>13</u> Cubic Yards..... _____ Tons..... _____	
Waste Type <input checked="" type="checkbox"/> Construction & Demolition <input type="checkbox"/> Tires <input checked="" type="checkbox"/> Yard Waste <input type="checkbox"/> Animals <input type="checkbox"/> Contaminated Soil <input type="checkbox"/> Other _____	Combined Disposal Unit <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Monofill Unit <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Note: Disposal of dead animals must be approved by the Executive Secretary			
X. Fee and Application Documents			
Indicate Documents Attached To This Application <input checked="" type="checkbox"/> Facility Map or Maps <input type="checkbox"/> Ground Water Report		<input type="checkbox"/> Application Fee: Amount \$ <input checked="" type="checkbox"/> Facility Legal Description <input checked="" type="checkbox"/> Closure Design <input checked="" type="checkbox"/> Plan of Operation <input checked="" type="checkbox"/> Cost Estimates <input checked="" type="checkbox"/> Waste Description <input checked="" type="checkbox"/> Financial Assurance	
		Class VI Special Requirements <input type="checkbox"/> Documents required by UCA 19-6-108(9) and (10)	
I HEREBY CERTIFY THAT THIS INFORMATION AND ALL ATTACHED PAGES ARE CORRECT AND COMPLETE.			
Signature of Authorized Owner Representative <u>Donna J. Metzler</u> Name typed or printed		Title <u>City Manager</u> Address <u>217 East Center Street, Moab, Utah 84002</u>	
Signature of Authorized Land Owner Representative (if applicable) <u>Thomas L. Edwards</u> Name typed or printed		Title <u>DISTRICT manager</u> Address <u>1000 E. Sandflats RD MOAB, UT 84002</u>	
Signature of Authorized Operator Representative (if applicable) <u>Thomas L. Edwards</u> Name typed or printed		Title <u>DISTRICT manager</u> Address <u>1000 E. Sandflats RD, MOAB, UT. 84002</u>	

Utah Class IV and VI Landfill Permit Application Checklist

Part II Application Checklist

I. Facility General Information	
Description of Item	Location In Document
Ia. General Information - All Facilities	
Completed Part I General information form above	Part I
General description of the facility (R315-310-3(1)(b))	Part II, Section 1
Legal description of property (R315-310-3(1)(c))	Part II, Section 3
Proof of ownership, lease agreement, or other mechanism (R315-310-3(1)(c))	Part II, Section 3
If the permit application is for a Class IV landfill, a demonstration that the landfill is not a commercial facility	Part II, Section 3
Waste type and anticipated daily volume (R315-310-3(1)(d))	Part II, Section 4a-b
Intended schedule of construction (R315-302-2(2)(a))	Part II, Section 4a
Ib. General Information - New Or Laterally Expanding Facilities	
Documentation that the Historical Survey requirements of R315-302-1(2)(f) have been met (R315-305-4(1)(b)(vi))	Not applicable
Name and address of all property owners within 1000 feet of the facility boundary (R315-310-3(2)(i))	Not applicable
Documentation that a notice of intent to apply for a permit has been sent to all property owners listed above (R315-310-3(2)(ii))	Not applicable
Name of the local government with jurisdiction over the facility site (R315-310-3(2)(iii))	Part II, Section 3
Ic. Location Standards - New Or Laterally Expanding Class IVa Landfills (R315-305-4(1)(a))	
Land use compatibility	Not applicable
Maps showing the existing land use, topography, residences, parks, monuments, recreation areas or wilderness areas within 1000 feet of the site boundary	Not applicable
Certifications that no ecologically or scientifically significant areas or endangered species are present in site area	Not applicable
Maps showing the location of dwellings, residential areas, other structures, and historic structures.	Not applicable
List of airports within five miles of facility and distance to each	Not applicable
Geology	Not applicable
Geologic maps showing significant geologic features, faults, and unstable areas	Not applicable
Maps showing site soils	Not applicable
Surface water	Not applicable
Magnitude of 24 hour 25 year and 100 year storm events	Not applicable

Utah Class IV and VI Landfill Permit Application Checklist

I. Facility General Information	
Description of Item	Location In Document
Average annual rainfall	Not applicable
Maximum elevation of flood waters proximate to the facility	Not applicable
Maximum elevation of flood water from 100 year flood for waters proximate to the facility	Not applicable
Wetlands	Not applicable
Ground water	Not applicable
Id. Location Standards - New Or Laterally Expanding Class IVb and VI Landfills	
Floodplains as specified in R315-302-1(2)(c)(ii) (R315-305-4(1)(b)(i))	Not applicable
Wetlands as specified in R315-302-1(2)(d) (R315-305-4(1)(b)(ii))	Not applicable
The landfill is located so that the lowest level of waste is at least ten feet above the historical high level of ground water (R315-305-4(1)(b)(iii))	Not applicable
Geology as specified in R315-302-1(2)(b)(i) and (iv) (R315-305-4(1)(b)(iv))	Not applicable
Ie. Additional Location Standards - New Or Laterally Expanding Class IVb and VI Landfills Or Landfills Requesting That Dead Animals Be Added As A New Waste Stream (R315-305-4(1)(a)(v))	
Maps showing the existing land use, topography, residences, parks, monuments, recreation areas or wilderness areas within 1000 feet of the site boundary	Not applicable
Certifications that no ecologically or scientifically significant areas or endangered species are present in site area	Not applicable
Maps showing the location of dwellings, residential areas, other structures, and historic structures.	Not applicable
List of airports within five miles of facility and distance to each	Not applicable
If. Plan Of Operations - All Facilities (R315-310-3(1)(e) and R315-302-2(2))	
Description of on-site waste handling procedures and an example of the form that will be used to record the weights or volumes of waste received (R315-302-2(2)(b) And R315-310-3(1)(f))	Part II, Section 4b, Attachment 6
Schedule for conducting inspections and monitoring, and examples of the forms that will be used to record the results of the inspections and monitoring (R315-302-2(2)(c), R315-302-2(5)(a), and R315-310-3(1)(g))	Part II, Section 4b, Attachment 5
Contingency plans in the event of a fire or explosion (R315-302-2(2)(d))	Part II, Section 4c
Plan to control fugitive dust generated from roads, construction, general operations, and covering the waste (R315-302-2(2)(g))	Part II, Section 4k
Plan for letter control and collection (R315-302-2(2)(h))	Part II, Section 4e
Procedures for excluding the receipt of prohibited hazardous or PCB containing waste (R315-302-2(2)(j))	Part II, Section 4f

Utah Class IV and VI Landfill Permit Application Checklist

I. Facility General Information	
Description of Item	Location In Document
Procedures for controlling disease vectors (R315-302-2(2)(k))	Part II, Section 4j
A plan for alternative waste handling (R315-302-2(2)(l))	Part II, Section 4d
A general training and safety plan for site operations (R315-302-2(2)(o))	Part II, Section 4i
Any recycling programs planned at the facility (R315-303-4(6))	Not applicable
Any other site specific information pertaining to the plan of operation required by the Executive Secretary (R315-302-2(2)(o))	None
Ig. Additional Plan Of Operation Requirements - Class IVa Facilities	
Corrective action programs to be initiated if ground water is contaminated (R315-302-2(2)(e))	Not applicable
II Facility Technical Information	
IIa. Maps - All Facilities	
Topographic map drawn to the required scale with contours showing the boundaries of the landfill unit, ground water monitoring well locations, gas monitoring points, and the borrow and fill areas (R315-310-4(2)(a)(i))	Attachment 2
Most recent U.S. Geological Survey topographic map, 7-1/2 minute series, showing the waste facility boundary; the property boundary; surface drainage channels; any existing utilities and structures within one-fourth mile of the site; and the direction of the prevailing winds (R315-310-4(2)(a)(ii))	Attachment 1
IIb. Geohydrological Assessment - Class IVa Landfills (R315-310-4(2)(b))	
Local and regional geology and hydrology including faults, unstable slopes and subsidence areas on site (R315-310-4(2)(b)(i))	Not applicable
Evaluation of bedrock and soil types and properties including permeability rates (R315-310-4(2)(b)(ii))	Not applicable
Depth to ground water (R315-310-4(2)(b)(iii))	Not applicable
Quantity, location, and construction of any private or public wells on-site or within 2,000 feet of the facility boundary (R315-310-4(2)(b)(v))	Not applicable
Tabulation of all water rights for ground water and surface water on-site and within 2,000 feet of the facility boundary (R315-310-4(2)(b)(vi))	Not applicable
Identification and description of all surface waters on-site and within one mile of the facility boundary (R315-310-4(2)(b)(vii))	Not applicable
For an existing facility, identification of impacts upon the ground water and surface water from leachate discharges (R315-310-4(2)(b)(viii))	Not applicable
Calculation of site water balance (R315-310-4(2)(b)(ix))	Not applicable

Utah Class IV and VI Landfill Permit Application Checklist

IIc. Engineering Report, Plans, Specifications, And Calculations - All Facilities	
Unit design to include cover design; fill methods; and elevation of final cover including plans and drawings signed and sealed by a professional engineer registered in the State of Utah, when required (R315-310-3(1)(b) and R315-310-4(2)(c)(iii))	Part III, Section 2
Design and location of run-on and run-off control systems (R315-310-4(2)(c)(viii))	Attachment 8
Anticipated facility life and the basis for calculating the facility's life (R315-310-4(2)(c)(ii))	Part II, Section 6b-c
Engineering reports required to meet the location standards of R315-305-4 including documentation of any demonstration or exemption made for any location standard (R315-310-4(2)(c)(i))	Part III, Section 2
Identification of borrow sources for final cover (R315-310-4(2)(c)(iv))	Part II, Section 4b
Run-off collection, treatment, and disposal and documentation to show that any treatment system is being or has been reviewed by the Division of Water Quality (R315-310-4(2)(c)(v) and R315-310-3(1)(i))	Part II, Section 4m
IId. Closure Requirements - All Facilities	
CLOSURE PLAN (R315-310-3(1)(h))	Part II, Section 6, Attachment 4
Closure schedule (R315-310-4(2)(d)(i))	Part II, Section 6c
Design of final cover (R315-310-4(2)(c)(iii))	Part II, Section 6a, Attachment 4
Capacity of site in volume and tonnage (R315-310-4(2)(d)(ii))	Part II, Section 6b
Final inspection by regulatory agencies (R315-310-4(2)(d)(iii))	Part II, Section 6e
IIe. Post-Closure Requirements- All Facilities	
POST-CLOSURE CARE PLAN (R315-310-3(1)(h))	Part II, Section 8
Changes to record of title, land use, and zoning restrictions (R315-310-4(2)(e)(ii))	Part II, Section 6f
Maintenance activities to maintain cover and run-on/run-off control systems (R315-310-4(2)(e)(iii))	Part II, Section 8c
List the name, address, and telephone number of the person or office to contact about the facility during the post-closure care period (R315-310-4(2)(e)(vi))	Part II, Section 9
IIIf. Financial Assurance - All Facilities (R315-310-3(1)(j))	
Identification of closure costs including cost calculations (R315-310-4(2)(d)(iv))	Part II, Section 6d, Attachment 9
Identification of post-closure care costs including cost calculations (R315-310-4(2)(e)(iv))	Part II, Section 8e, Attachment 9
Identification of the financial assurance mechanism that meets the requirements of Rule R315-309 and the date that the mechanism will become effective (R315-309-1(1))	Attachment 10

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APPENDICES

- A Current Moab Class IV Solid Waste Landfill Permit Renewal
- B Moab Solid Waste Permit Modification to Include KSUE Corporation as an Operator

ATTACHMENTS

- 1 Site Location Map
- 2 Existing Contour Map
- 3 Legal Description and Proof of Ownership
- 4 Final Closure Plan
- 5 Random Load Inspection Form
- 6 Daily Log Sample
- 7 Monthly Inspection Form
- 8 Utility Lines and Stormwater Control
- 9 Closure and Post-Closure Care Cost Estimates
- 10 Joint Resolution of Financial Assurance

PART I – General Data

1. Name of Facility: Moab Class IV Landfill
2. Site Location: Two miles east of the intersection of Center and Main in Moab, Utah on Sand Flats Road
3. Facility Owner: City of Moab, Utah; and Grand County, Utah
4. Facility Operator: Grand County Solid Waste Management Special Service District #1
5. Contact Person: Thomas Edwards, District Manager
Grand County Solid Waste Management Special Service District #1
P.O. Box 980
Moab, Utah 84532
(435) 259-3867
6. Type of Facility: Non-Commercial Class IV Landfill
7. Type of Application: Permit Renewal, Original Permit Number 9704
8. Property Ownership: Operated by Applicant for property owners:

City of Moab, Utah and Grand County, Utah
155 W 200 S 125 E Center
Moab UT 84532 Moab UT 84532
(435) 259-5121 (435) 259-1321
9. Certification of Submitted Information by Applicant, Grand County Solid Waste Management Special Service District #1:

Thomas Edwards

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

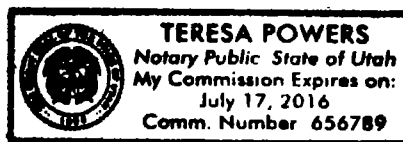
Date: _____

SUBSCRIBED AND SWORN to before me this 14th day of October, 2014

My commission expires on the 17th day of July, 2017.

Teresa Powers
Notary Public in and for State of Utah County of Grand

(SEAL) Grand County, Utah



State of Utah

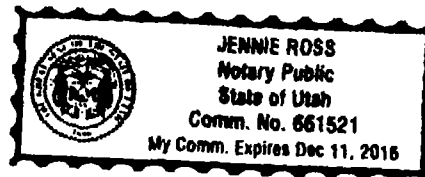
County of Grand

Appeared before me, Donna Metzler, the signer of the attached Utah Class IV and VI Landfill Application Form on September 23, 2014.

Notary Public

Jennie Ross

Residing in Moab, UT



PART II – GENERAL REPORT

1. General Description of Facility

The Moab Class IV Landfill (Landfill) opened March 27, 1997, and is located approximately two miles east of the intersection of Center and Main in the City of Moab on East Sand Flats Road, as shown on Attachment 1. The Landfill occupies the area around the old Moab landfill, which had been accepting Class I municipal solid wastes (MSW) since as early as the 1950's and was closed in 1997. A new municipal waste landfill, the Klondike Class I landfill, was opened March 27, 1997, approximately 20 miles north of Moab. It is not open to the public and accepts waste from franchised haulers only.

The Landfill accepts construction and demolition (C&D) debris and yard waste. The C&D wastes are being used to bring the closed Class I facility up to final (finished) grades, as described in the Closure Plan (see Section 2 below).

The Landfill serves Grand County. Class IV waste is accepted at the Landfill from citizens, businesses, and local haulers for a tipping fee on a cubic yard basis.

The Landfill site is located on a hill approximately 400 feet above the elevation of the City of Moab. Elevations at the site range from 4,350 to 4,480 feet above mean sea level, based on information submitted in the original permit application. A dry wash lies immediately east of the site between the Landfill and the Slick Rock Trails area. The dry wash drains southward to Mill Creek. Waste is placed on the east slope of the hill facing away from the City of Moab and toward the dry wash and Slick Rock Trails areas. A contour map of the facility, developed for the original permit application, is provided as Attachment 2. Geology consists mainly of Navajo sandstone and loose sands from excavations. The sparse vegetation that is present at the site consists of low-lying scrub brush near the wash.

2. Relationship to County Solid Waste Management Plan

The Grand County Solid Waste Management Special Service District #1 (District) completed a Solid Waste Management Plan in 1990. A Solid Waste Management Feasibility Study completed in March 1994 amended the 1990 plan. The 1994 Feasibility Study recommended closing the old Moab landfill as a Class I facility and constructing a new Class I facility at the Klondike site. Closure of the old Moab landfill required recontouring for stability and maintenance purposes. The study found that recontouring the entire landfill site with Class IV wastes would be more economically feasible to the District than recontouring with clean fill. The District intends to reach final grades at the Landfill with the placement of Class IV waste in accordance with the study. The District is currently capping the recontoured surfaces with two feet of soil.

3. Legal Description and Proof of Ownership

The City of Moab and Grand County own the Landfill property, although the majority of the Landfill lies on a 50-acre site owned by the City of Moab. The City property deed is provided in

Attachment 3 and includes a legal description of the site. The City of Moab has given the District authorization to operate the Landfill on the property and the written authorization is included in Attachment 3.

The Final Closure Plan provided in Attachment 4, and shows approximately 0.80 acre of Class IV fill area off the north Landfill boundary on Grand County property. This Class IV waste fill is required to obtain 3-to-1 side slopes without moving existing waste. The County has given the District authorization to fill Class IV waste on the property. Attachment 2 provides the Existing Contour Map and shows two waste fill areas encompassing approximately 2.3 acres on Grand County and Bureau of Land Management (BLM) land. These areas have already been closed are not part of this permit renewal application.

Appendix A provides the current solid waste permit renewal for the Moab Class IV Landfill and Appendix B provides a solid waste permit modification, dated March 31, 2004, to include Ksue Corporation as a Landfill operator. However, Ksue Corporation no longer is operation at the Moab Landfill.

4. Plan of Operation

a. Schedule of Construction

The District closed the old landfill with two feet of soil and constructed the new Klondike Landfill in March of 1997. The District opened this Moab Landfill as a Class IV Landfill the same day that the Klondike Landfill opened. The Klondike Landfill accepts Class 1 MSW and the Moab Landfill accepts Class IV C&D waste.

The Landfill will be filled in two phases. In Phase 1, the lower portion of the Landfill will be brought up to an elevation of 4,420 feet mean sea level (msl) by placing Class IV waste in lifts along the eastern and southern sides of the closed Class I facility. In Phase 2, the Landfill will be brought up to a final elevation of approximately 4,475 feet msl by placing Class IV waste in lifts around the south, east, and north sides of the closed Class I facility. In January of 2003, the Landfill was fenced with a 6-foot chain link fence.

b. Solid Waste Handling Procedures

A gate attendant will check all incoming loads of waste at the Landfill gatehouse and will visually inspect each load for prohibited waste. In 2008, the Landfill averaged 100 loads per month. Based on a one percent waste inspection schedule, a thorough inspection of a randomly selected load will occur one time each month. Loads containing prohibited waste; such as MSW, hazardous waste, special waste, and liquids will be rejected. The driver of the waste vehicle will be required to remove prohibited waste if they are unloaded at the Landfill. A copy of the District's random load inspection form is provided as Attachment 5.

The gate attendant will record the volume of waste by measuring the quantity of the waste in the vehicle by cubic yards. A sample of the daily log form the District uses to track incoming volumes and waste types is provided as Attachment 6. The gate attendant will direct the driver to dump at the working face. The driver of the vehicle will be responsible for unloading the

waste. Waste will be unloaded by hand or automatically from a dump truck or waste collection vehicle.

All waste will be covered with a minimum of six inches of onsite soil or crushed asphalt as intermediate cover at least once per quarter (per correspondence dated September 23, 1999 and retained for this permit renewal application, since conditions have not changed). The limits of the active tipping area will be delineated by cones and/or other barricades as required to prevent public access. Active area is defined as any waste area that has not been covered by final or intermediate cover. Only one active area will be utilized at any one time. The active area will not exceed 10,000 square yards. When waste elevations reach final grades, the waste will be covered with an additional 2 feet of soil to meet the final cover requirements for cover thickness and slopes.

c. Fire Contingency Plan

Waste fires at the Landfill will be contained by the use of onsite sand (which is always available from nearby stockpiled cover) and fire extinguishers kept in the gatehouse and on mobile equipment. The likelihood of a fire spreading outside the active area is minimal since little to no vegetation is present on site. The City of Moab fire department will respond to the site if a fire becomes uncontrollable. The fire department can be accessed by calling 911. The gatehouse attendant has access to a mobile phone at all times. Loads containing burning waste are rejected.

d. Alternative Waste Handling

Other than fire, no events can be predicted during which the waste handling procedures described above are inappropriate. No equipment is required for daily operations. Wet weather will not prevent operation since the site is sandy and well drained. If a fire occurs, the District will open another active area. The Landfill will be closed and waste routed to the Klondike Landfill or the Moab transfer station in the unlikely event that the Landfill could not dispose of Class IV waste.

e. Plan for Litter Control

Litter is unsightly, can clog machinery, and causes environmental as well as public relations problems. The Landfill Attendant will keep litter under control and cleaned up. The working face will be kept downwind as much as possible so the wind will blow loose litter back onto the working face. Prompt compaction will also reduce litter.

Effective use of cover soil also keeps blowing litter under control. This cover and a perimeter fence prevent litter from leaving the landfill site. Constantly shifting high velocity winds accompanying storms, and thermals known as "dust devils," are common at this site. Application of soil and a perimeter fence are an effective barrier method to control wind-blown litter. Fencing exists at the perimeter of the landfill to contain litter so it can be retrieved within the landfill site. District landfill attendants will regularly patrol the fence and terrain surrounding the landfill.

f. Plan for Excluding Prohibited Waste

The gate attendant will visually inspect each load for prohibited waste. Loads containing prohibited waste such as household or MSW, hazardous waste, special waste, and liquids will be rejected. The driver of any vehicle which unloads prohibited waste will be required to re-load prohibited waste at the Landfill. A random load inspection will be performed at least once each month, which will help continue the education process for the public and reinforce the responsibility to separate prohibited and acceptable waste.

Plans for preventing prohibited wastes from being tipped at the Landfill are discussed in paragraph 4(b) above.

g. Landfill Inspections and Monitoring

District personnel will perform landfill monitoring and inspections listed in Table 1.

Table 1. Inspections and Monitoring Schedule

Type of Monitoring/Inspection	Frequency	Description of Monitoring/Inspection
Landfill Gas	Quarterly	Field measurements of Landfill at ground surface around the Landfill perimeter and inside Landfill structures using a combustible gas meter
Drainages, Roads, Intermediate, and Final Cover Areas	Quarterly	Visual inspection for needed repairs to stormwater run-on/run-off controls, soil cover, and site roads due to erosion, etc.
Prohibited Waste	1X Monthly	1% random load inspection schedule
Disease Vectors	Monthly	Visual inspection for signs of vector or rodent activity; weed control
Site Control	Monthly	Visual inspection of perimeter fence to check fence's integrity
Site Control	Daily	Visual inspection of main gate to check for integrity and litter control
Opacity	Daily	Visual inspection for opacity to ensure that procedures are controlling fugitive dust

The form(s) used to record inspections and monitoring events is provided as Attachment 7.

h. Personnel Training

The District will ensure that all personnel responsible for operation of the Landfill have adequate training to comply with this Plan of Operation. At least one District employee will be trained and certified under the Manager of Landfill Operations (LOMO) program accredited by the Solid Waste Association of North America. Landfill operators will receive on-the-job training from certified staff and will receive an 8-hour refresher training annually that covers landfill operations and waste screening. The District will maintain records of this training in personnel files.

i. Safety

The following safety equipment and protective gear will be stored onsite at the Landfill:

Table 2. Safety Equipment and Protective Gear

Equipment	Location
5-pound Power-Sentry Fire Extinguishers	Each piece of mobile equipment
20-pound Power-Sentry Fire Extinguisher	Onsite
Earplugs	Onsite
Safety Glasses	Onsite
Gloves	Onsite
Cellular Phone	Onsite
Hard Hat	Onsite
Dust Mask	Onsite
Safety Vest	Onsite

The District and its contractors are responsible for training their respective employees in the location and use of this safety equipment, as well as the safety requirements for heavy equipment. The District will conduct quarterly safety meetings to discuss general and specific safety issues. Attendance at these meetings will be mandatory for all Landfill employees.

A single utility ground line connects the gatehouse with 120-volt power. The line is protected from damage by placement and is clearly marked and set away from traffic areas. The utility line will be adjusted as the gatehouse shifts position within the active area.

The following emergency telephone numbers must be posted in a prominent location in the Landfill gatehouse:

Emergency	911
Fire Dept. (non-emergency)	435-259-5557
Highway Patrol	435-259-5441
Sheriff Dept.	435-259-8115
Hospital	435-259-7191
District Manager	435-259-3867

j. Disease Vector Control

The District will control insect, rodent, and bird populations by controlling the waste disposed in the Landfill and by use of cover.

By excluding food waste and other putrescible waste from the Class IV Landfill, the District will discourage activity and viability of populations of most insects and rodents. Intermediate cover should further reduce the habitat for these disease vectors. If additional measures are needed the District will contract with a professional exterminator to establish a protocol for control of these pests.

k. Fugitive Dust

Dust is caused by wind, traffic movement on unpaved roads, heavy equipment, and vehicles operating within the Landfill. The road to the Landfill gate from Sand Flats Road is unpaved. If

fugitive dust is observed on this road or within the Landfill parameter, the District will contract for water truck deliveries to control dust as conditions require.

l. Methane Gas Monitoring

The Landfill will be monitored on a quarterly basis for methane gas releases using a handheld photo ionization detector (PID). A PID will be made available upon request by contacting David Ariotti, the District Engineer for the Utah Department of Environmental Quality (UDEQ), at (435) 637-3671. The District will coordinate the monitoring events and will arrange for interpretation of the monitoring results if combustible gases are detected.

The procedure consists of walking the perimeter of the Landfill, recording PID readings at each corner of the fence line, as well as from within the gatehouse. If methane releases are detected in excess of 25% of the lower explosive limit (LEL) in the gatehouse, or more than 100% LEL at the property boundary, the following procedure is prescribed:

- Halt Landfill operations immediately. If personnel or the gatehouse appears to be threatened, evacuate the Landfill.
- If gas is detected in the gatehouse, open the doors and windows to allow the gas to escape.
- If off-site buildings or structures appear to be threatened, call the fire department, evacuate the property(ies), and notify the property owners.
- Call the District Manager. Monitor the release and determine temporary corrective action as soon as possible. Implement permanent corrective action as soon as practicable.
- Notify the UDEQ Division of Solid and Hazardous Waste (DSHW) immediately and submit a written report within 14 days of detecting the release.

If, at any time, concentrations of combustible gases exceed the standard set in DSHW Rules, the District will implement the requirement imposed on the District by DSHW regulations in effect at the time of exceedances.

m. Stormwater

Assuming a 25-year, 24-hour storm-total event of 2.0 inches (from NOAA Atlas), a soil runoff Curve Number of 85 (fine sand soils, no vegetation) and a total of 9 acres (top slope and side slopes), the maximum stormwater runoff would be 1.7 cubic feet per second. Based on a V-shaped channel (no bottom width) with 3:1 side slopes, minimum slope in the flowline of 1%, and a Manning "n" – a coefficient for open channel flow – of 0.04 (sluggish dirt channel), the maximum water depth calculated will be 0.60 foot. Therefore, a 2-foot berm should be adequate and has been constructed along the bottom and sides of the Landfill to control stormwater runoff (shown on Attachment 8). Topographically, the ground slopes away from the Landfill on all sides, so no stormwater run-on occurs.

5. Financial Assurance Plan

a. Cost Estimates for Closure

Closure of the Landfill will require placing and compacting two feet of onsite sand over the Landfill. All waste areas of the closed Class I facility were covered by 2 feet of soil before this facility opened as a Class IV Landfill. In January of 2003, fill and grade work was completed on top of the old portion of the Landfill, and slopes less than 2% received additional cover soils. Additional soil cover will be placed as needed to reach final slopes of 2% or greater. The Landfill will be operated so that the active area does not exceed 10,000 square yards in size. Attachment 9 presents estimates of the costs to perform closure and post-closure care of the Landfill. These cost estimates were calculated using UDEQ spreadsheets developed for cost estimating purposes and adjusted using a standard rate of inflation.

b. Financial Assurance Mechanism

The Landfill is owned jointly by the City of Moab and Grand County and is financially assured by them through a Joint Resolution of Financial Assurance, provided as Attachment 10).

6. Closure Plan

a. Installation of Final Cover

Final cover will consist of a minimum of two feet of onsite soil. During the first permit renewal process (2002), modeling confirmed that this final cover design meets UDEQ's requirements for an alternative landfill cap. DSHW correspondence dated October 11, 2001 and referenced in the first permit renewal permit application (March 2002) concurs. Since conditions have not changed for this permit renewal application, no adjustments to the final cover design are being presented.

As described in the 2002 permit renewal application (March, 2002), slopes on top of the Landfill will be 2% or greater to promote precipitation runoff. Final contours are shown on Attachment 4. Approximately 770,000 cubic yards of Class IV waste and cover soil will be placed to achieve the final contours. Final side slopes will be graded at 3:1 slopes. All areas requiring final cover at one time will be no greater than 10,000 square yards, and final cover will be placed as waste reaches final grades. Asphalt received at the Landfill may be used as road base, or as daily cover, but will not be used as final cover material.

For erosion control, the final cover will be seeded as follows:

1. Seed will either be broadcast or drilled; using whichever option will produce the best vegetative cover. The seed mixture shall contain no noxious weeds and shall meet the following specifications and :
 - Indian Race Grass: 10 lbs pure live seed (PLS)/acre broadcast
5 lbs PLS/acre drilled
 - 4-Wing Saltbush: 4 lbs PLS/acre broadcast
2 lbs PLS/acre drilled

final cover at one time will be no greater than 10,000 square yards, and final cover will be placed as waste reaches final grades. Asphalt received at the Landfill may be used as road base, or as daily cover, but will not be used as final cover material.

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 - Indian Race Grass: 10 lbs pure live seed (PLS)/acre broadcast
5 lbs PLS/acre drilled
 - 4-Wing Saltbush: 4 lbs PLS/acre broadcast
2 lbs PLS/acre drilled
2. Seed will be applied prior to snowfall when possible. When seed must be applied and no snowfall is anticipated, prepared areas will be moistened before planting if soil is dry. Area will be watered thoroughly and surface moisture will be allowed to dry before planting, avoiding muddy soil conditions. After seed has been applied the surface will be lightly worked (with harrow or tracked equipment) to maximum depth of about one inch.

b. Capacity of Site

The net airspace remaining at the site in 2002, as stated in the 2002 permit renewal application, was 496,000 cubic yards. Since that time, through the year 2013 (the most recent data available), 235,866 cubic yards of waste have been accepted. Assuming a 3:1 waste to cover soil ratio and two feet of final cover, the net airspace remaining at the site is approximately 233,251 cubic yards.

c. Closure Implementation Schedule

Closure of the Landfill will occur in stages as waste reaches final elevations. Final cover will be placed once per year over all areas that have reached final grades.

Final contours will be achieved in two phases. In the first phase, waste will be placed on the lower side slopes near the dry wash. Waste will be placed on the slopes up to the elevation of the first tier at 3:1 slopes. The City accepted approximately 16,000 cubic yards of construction and demolition debris and yard waste each year from 2003 through 2007 (the most recent data available). At an acceptance rate of 16,000 cubic yards/year, reaching final grades in Phase 1 will take between two and five years. During Phase 2, waste will be placed to the top of the second tier. Waste will be placed on the sides at 3:1 slopes. Reaching final grades in Phase 2 will take between 15 and 20 years, following completion of Phase 1. Currently, final closure is projected for year 2027.

d. Closure Cost Estimates

Using the costs calculated in the 2013 annual report to the UDEQ (the most recent data available), adjusting those values for inflation according the US Bureau of Labor Statistics Consumer Price Index Inflation Calculator for 2008 dollars, the total estimated closure cost is \$99,128 in dollars. The cost estimate is detailed in Attachment 9.

e. Final Inspection by Regulatory Agencies

The District has filed a certification with the Grand County Recorder's Office that the old landfill site was closed in accordance with the approved closure plan.

Upon closure of the Moab Class IV Landfill, the District will provide certification that the site has been closed in accordance with the approved closure plan. The DSHW will have the opportunity to inspect the Landfill before it closes as a Class IV facility.

f. Changes to Records of Title, Land Use, and Zoning Restrictions

The District will notify the DSHW and the Grand County Recorder's Office if there is a change in record of title, land use, or zoning restrictions at the site. Within 60 days of closure, the District will submit the required plats and a statement of fact concerning the location of the disposal site to the county recorder to be recorded as part of the record of title, and submit proof of the record of title filing to the Executive Secretary (R315-302-2(6)UAC).

7. Commercial Class IV Landfill Requirements

Not Applicable.

8. Post-Closure Plan

a. Monitoring

Landfill gas monitoring will be performed for 30 years after Landfill closure to assess potential impacts of the Landfill on the environment. The possible lateral migration of landfill gases will be monitored quarterly at each corner of the Landfill perimeter fence. The percent of explosive gas (expressed as a percentage of the LEL for methane) will be recorded at each location. If readings exceeding 100% of the LEL are noted at any location, appropriate regulatory agencies will be notified and corrective action will be initiated.

b. Maintenance of Monitoring Systems and Facility Structures

After closure, no Landfill facilities or physical monitoring systems will remain at the site. The Landfill perimeter fence and gate will be inspected when conducting quarterly Landfill gas monitoring.

c. Maintenance of Cover and Drainage Systems

A post-closure maintenance program will be implemented at the Landfill in order to maintain the integrity of the Landfill's final cover. The final cover areas will be inspected quarterly for evidence of erosion, ponded water, odor, exposed refuse, cracks, settlement, slope failure, and leachate seeps. The Landfill's final grades will be inspected and maintained in order to maintain their integrity. Areas where water has collected (ponded) will be re-graded. Erosion damage resulting from heavy rainfall will be repaired.

Cracks in the final cover will be scarified and re-compacted or sealed with bentonite slurry. Any erosion damage, which may be caused by extremely heavy rainfall, will be repaired. Temporary berms, ditches, and straw mulch will be used to prevent further erosion damage to soil cover areas until site conditions permit the final cover to be re-established and vegetation to be re-seeded. Preventive maintenance for the final cover should preclude problems regarding leachate generation from infiltration of surface water, gas venting through the cover, and vectors attracted by exposed refuse.

d. Schedule of Post-Closure Care

After closure, the Landfill will be monitored and maintained quarterly.

e. Post-Closure Costs

Using the costs calculated in the 2013 annual report to the DSHW (the most recent data available), adjusting those values for inflation according the US Bureau of Labor Statistics Consumer Price Index Inflation Calculator for 2008 dollars, the total estimated 30-year post-closure maintenance cost is \$48,784.00. The cost estimate is detailed in Attachment 9.

9. Contact Person/Office

During the post-closure period, correspondence should be directed to:

District Manager
Solid Waste Special Service District #1
PO Box 980
Moab, UT 84532

PART III – TECHNICAL DATA

1. Topographic Map

Attachment 1 is a USGS 7.5-minute series topographic map showing the Landfill. The map shows the facility property, the latitude and longitude coordinates of the front gate, the land use and zoning of the surrounding area, surface drainage channels, direction of prevailing winds, and a typical location of the gatehouse (its location is adjusted incrementally as the active area changes). The direction of prevailing winds was determined by observation by District employees during the first permit renewal application in March 2002. There are no structures within one-fourth mile of the site.

There is an overhead electric power line that terminates on the eastern edge of the second tier of the Landfill, with a ground line that connects to the gatehouse to provide 120-volt power (shown on Attachment 8). The gatehouse is approximately 100 square feet in size and is placed on skids to allow relocation as needed.

2. Engineering Report

a. Facility Design and Operation

As described in the original permit application (1996) and the first permit renewal application (2002), the facility design consists of two feet of cover soil over all existing waste at the site and two feet of cover over Class IV waste at final grades and closure. Existing and final grades, as drawn in the original and first renewal permit applications, are shown on Attachments 2 and 4. Additional fill will be placed in areas where existing grades are currently less than 2%. Daily operation of the site will consist of screening incoming loads and directing the unloading of waste. Daily operation is discussed in detail in Section 4 of this document.

The District will either self-perform or contract with a private contractor for earthwork at the facility. Six inches of onsite soil will be placed over Class IV waste at least once per quarter. Each year an additional amount of soil cover, sufficient to bring the total cover depth to 2 feet over the waste, will be placed over waste that is at final grades. Cover depth will be monitored closely, using wooden stakes and test holes as quality control measures, while final cover is placed. Final cover material will consist of sand and will be obtained from the sandstone slope at the south and west ends of the site. At any given time, the active area will not exceed 10,000 square yards in size. The active area will be graded at a minimum 2% slope to one end to promote drainage.

b. Stormwater Control

A stormwater control berm approximately 2 feet tall has been constructed along the southern and eastern boundaries of the Landfill (shown on Attachment 8). It will provide runoff and run-on control between the Landfill and the dry wash. Stormwater running off the active area of the Landfill will collect against the inside of the berm and will be allowed to evaporate. Average annual rainfall at the Landfill is approximately 9 inches.

c. Equipment

Either the District or the contractor will provide the equipment to compact waste and place cover and build berms. If the District is providing earthwork, it will have appropriate equipment onsite (currently consisting of two dozers and two wheeled loaders), stored securely on the Landfill property when not in use.

d. Erosion Control

Final cover placed and seeded will provide erosion control. Erosion will also be addressed by frequent monitoring and maintenance by the District, so that proper slopes and vegetation are maintained on the top and sides of the Landfill.

e. Closure Design, Construction, Maintenance, and Land Use

The Landfill will be closed in accordance with the final closure plan. Final grades will be achieved through placement of Class IV waste. Final cover will consist of two feet of onsite soils. Final cover will be placed in stages as the waste reaches final grades once per year. No stormwater structures or monitoring facilities that will require maintenance after closure are located onsite. The Landfill will be used as open space after closure.

APPENDIX A

APPENDIX A
CURRENT MOAB CLASS IV SOLID WASTE LANDFILL
PERMIT RENEWAL



Utah!

Where ideas connect

Department of Environmental Quality
Division of Solid and Hazardous Waste

RECEIVED
11/3/03

Michael O. Leavitt
Governor
Dianne R. Nielson, Ph.D.
Executive Director
Dennis R. Downs
Director

288 North 1460 West
P.O. Box 144880
Salt Lake City, Utah 84114-4880
(801) 538-6170
(801) 538-6715 Fax
(801) 536-4414 T.D.D.
www.deq.utah.gov

October 30, 2003

Jane S. Jones, District Manager
Solid Waste Management Special Service District #1
P.O. Box 980
Moab, UT 84532

RE: Moab Class IV Landfill Permit Renewal

Dear Ms. Jones:

Enclosed in the solid waste permit renewal (#9704R1) for the Moab Class IV Landfill. The permit is valid for five years from the effective date. Application for renewal must be made 180 days prior to the expiration date (UCA R315-311-1(3)).

If you have questions the permitting process or other solid waste issues, please contact Phil Burns or Ralph Bohn at (801) 538-6170.

Sincerely,

Dennis R. Downs, Executive Secretary
Utah Solid and Hazardous Waste Control Board

DRD/PEB/kk

Enclosure: Moab Landfill Solid Waste Permit Renewal

c: David Cunningham, B.S.N., R.N., Director, Southeast Utah Dist. Health Department
David Ariotti, DEQ Southeastern District Engineer

UTAH SOLID AND HAZARDOUS WASTE CONTROL BOARD
SOLID WASTE PERMIT

CLASS IV ~~LANDFILL~~ OK

Pursuant to the provisions of the *Utah Solid and Hazardous Waste Act*, Title 19, Chapter 6, Utah Code Annotated (UCA) 1953, as amended (the Act) and the *Utah Solid Waste Permitting and Management Rules*, Utah Administrative Code (UAC) R315-301 through 320 adopted thereunder,

City of Moab, Utah and Grand County, Utah as owners, and

Solid Waste Special Service District #1 as operator

are hereby authorized to operate the Moab Class IV Landfill located in NW ¼ SW ¼ of Section 5 and the E ½ SE ¼ NE ¼ SE ¼, and E ½ NE ¼ SE ¼ SE ¼ of Section 6, Township 26 South, Range 22 East, Salt Lake Base and Meridian, Grand County, Utah as shown in the permit application that was determined complete on August 12, 2003.

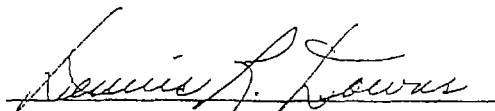
The operation of the landfill is subject to the condition that the Solid Waste Special Service District #1 and the City of Moab and Grand County (Permittees) meet the requirements set forth herein

All references to UAC R315-301 through 320 are to regulations that are in effect on the date that this permit becomes effective.

Effective date: November 1, 2003.

Expiration date: October 31, 2008.

Signed this 30 day of October, 2003.


Dennis R. Downs, Executive Secretary
Utah Solid and Hazardous Waste Control Board

PERMIT REQUIREMENTS

LANDFILL NAME: Moab Class IV Landfill

OWNER NAME: Solid Waste Special Service District #1

OWNER ADDRESS: P. O. Box 980
Moab, Utah 84532

OWNER PHONE NO. (435) 259-3867

OPERATOR NAME: as above

TYPE Class IVb Noncommercial Solid Waste Landfill

APPROVAL # 9704R1

LOCATION Landfill site is located in NW ¼ SW ¼ of Section 5 and the E ½ SE ¼ NE ¼ SE ¼, and the E ½ NE ¼ SE ¼ SE ¼ of Section 6, Township 26 South, Range 22 East, SLBM; Grand County

Permit as used in this document is defined in UAC R315-301-2(55).

The application as deemed complete on August 12, 2003 is hereby approved and is incorporated by reference into this Solid Waste Permit. All representations made in the permit application are part of this permit and are enforceable under UAC 315-301-5(2). The permit renewal application will become part of the operating record of the Landfill. Where differences in wording exist between this permit and the renewal application, the wording of the permit supersedes that of the renewal application.

By this permit to operate, the Permittees shall be subject to the following conditions.

I. GENERAL COMPLIANCE RESPONSIBILITIES

A. General Operation

The Permittees shall operate the Class IV landfill in accordance with the conditions of this Permit and with all requirements of UAC R315-305, that are currently effective, unless otherwise noted in this permit. Any permit noncompliance constitutes a violation of UAC R315-305 and is grounds for appropriate enforcement action, permit revocation, modification, or denial of a permit renewal application.

B. Noncompliance

1. If monitoring, inspection, or testing indicates that any permit condition or any applicable rule under UAC R315-301 through 320 may be or is being violated, the Permittees shall promptly make corrections to the operation or other activities to bring the facility into compliance with all permit conditions or rules. In the event of any noncompliance with any permit condition or violation of an applicable rule, the Permittees shall promptly take any feasible action reasonably necessary to correct the noncompliance or violation and mitigate any risk to the human health or the environment. Actions may include eliminating the activity causing the noncompliance or violation and containment of any waste or contamination using barriers or access restrictions, placing of warning signs, or permanently closing areas of the facility. The Permittees shall: document the noncompliance or violation in the operating record, on the day the event occurred or the day it was discovered; notify the Executive Secretary of the Solid and Hazardous Waste Control Board within 24 hours, or the next business day following documentation of the event; and give written notice of the noncompliance or violation and measures taken to protect public health and the environment within seven days of Executive Secretary notification. Within thirty days of the documentation of the event, the Permittees shall submit, to the Executive Secretary, a written report describing the nature and extent of the noncompliance or violation and the remedial measures taken or to be taken to protect human health and the environment and to eliminate the noncompliance or violation. Upon receipt and review of the assessment report, the Executive Secretary may order the Permittees to perform appropriate remedial measures including development of a site remediation plan for approval by the Executive Secretary.
2. It shall not constitute a defense for the Permittees in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
3. Compliance with the terms of this permit does not constitute a defense to actions brought under any other local, State, or Federal laws. This permit does not exempt the Permittees from obtaining any other local, State or Federal permits or approvals.
4. The issuance of this Permit does not convey any property rights, other than the rights inherent in this permit, in either real or personal property, or any exclusive privileges nor does it authorize any injury to private property or

any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations including zoning ordinances.

5. The provisions of this Permit are severable. If any provision of this Permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect. If the application of any provision of this Permit to any circumstance is held invalid, its application to other circumstances shall not be affected.

C. Inspection and Inspection Access

The Permittees shall allow the Executive Secretary of the Utah Solid and Hazardous Waste Control Board or an authorized representative of the Board, including representatives from the Southeastern Utah District Health Department, to enter at reasonable times and:

1. Inspect the landfill or other premises, practices or operations regulated or required under the terms and conditions of this Permit or UAC R315-301 through 320;
2. Have access to and copy any records required to be kept under the terms and conditions of the Permit or UAC R315-301 through 320;
3. Inspect any loads of waste, treatment, pollution management, or control facilities required under the Permit or regulated under UAC R315-301 through 320; and
4. Obtain a record of any inspection by photographic, videotape, electronic, or other reasonable means.

D. Prohibited Waste

No hazardous waste as defined by UAC R315-1 and R315-2; no PCB's as defined by UAC R315-301-2(53), except construction/demolition waste containing PCB's as specified by UAC R315-315-7(2)(a) and (c); no non-inert household waste, except waste resulting from the abatement, rehabilitation, renovation and remodeling of homes and other residences; no municipal waste; no special waste, except as specified in this permit; no non-inert commercial waste; and no non-inert industrial waste shall be accepted for treatment, storage, or disposal at the landfill.

E. Acceptable Waste

This permit is for disposal of nonhazardous construction/demolition waste, as defined in UAC R315-301-2(17); yard waste, as defined in UAC R315-301-2(85); inert waste, as defined in UAC R315-301-2(37); waste tires, when the requirements of UAC R315-320 are met, and petroleum contaminated soils as allowed in UAC R315-315-8(3).

F. Revocation

This permit is subject to revocation if any condition of this permit is not being met. The Permittees will be notified in writing prior to any proposed revocation action and such action will be subject to all applicable hearing procedures established under UAC R315-12 and the *Utah Administrative Procedures Act*.

Revocation of this permit does not revoke the financial assurance established for closure and post-closure care of the facility, nor remove any responsibility for completion of closure and post-closure care for the facility required in UAC R315-302-3.

G. Attachments Incorporation

Attachments incorporated by reference are enforceable conditions of this permit, as are documents incorporated by reference into the attachments. Language in this permit supercedes any conflicting language in the attachments or documents incorporated into the attachments.

II. DESIGN AND CONSTRUCTION

A. Construction

The landfill shall be constructed in the area designated and according to the design outlined in the permit application including landfill cells, fences, gates and berms.

The Permittees shall notify the Executive Secretary upon completion of construction of any landfill cells or run-on and run-off diversion systems. No landfill cells or run-on and run-off diversion system may be used until construction is approved by the Executive Secretary.

The Permittees shall notify the Executive Secretary of the completion of construction of any final cover system and shall provide all necessary

documentation and shall apply for approval of the construction from the Executive Secretary.

B. Run-On/Run-Off Control

Perimeter drainage channels shall be constructed as specified in the permit application. These channels shall be maintained at all times to effectively prevent run-off from the surrounding property from entering the landfill and run-off from the landfill from leaving the landfill area.

III. LANDFILL OPERATION

A. Operations Plan

The Operations Plan included in the permit renewal application and the solid waste permit issued by the Executive Secretary shall be kept on-site at the landfill. The landfill shall be operated in accordance with the Operations Plan as included in the permit renewal application. If necessary, the facility owner may modify the Operations Plan, provided that the modification meets all of the requirements of UAC R315-301 through 320 and is as protective of human health and the environment as that approved in the permit renewal application. Any modification to the Operations Plan shall be noted in the operating record.

B. Security

The Permittees shall operate the Landfill in a manner such that unauthorized entry to the facility is prevented. All facility gates and other access routes shall be locked during the time the landfill is not open. At least one person, employed by the Solid Waste Special Service District #1, shall be at the landfill during all hours that the landfill is open. Fencing as shown in the permit application shall be maintained to prevent access of persons or livestock by other routes.

C. Waste Inspections

The Permittees shall visually inspect incoming waste loads to verify that no wastes other than those allowed by this permit are disposed in the landfill. A complete waste inspection shall be conducted at a minimum frequency of 1 % of loads received, but no less than three complete inspections per month.

All containers capable of holding more than five gallons of liquid will be inspected to determine if the waste is acceptable for disposal.

All loads that the operator suspects may contain a waste not allowed for disposal at the landfill will be inspected.

Complete inspections shall be conducted as follows:

1. The operator shall conduct the random waste inspection at the working face or an area designated by the operator;
2. Loads subjected to complete inspection shall be unloaded at the designated area;
3. Loads shall be spread by equipment or by hand tools;
4. A visual inspection of the waste shall be conducted by personnel trained in hazardous waste recognition and recognition of other unacceptable waste; and
5. The inspection shall be recorded on the waste inspection form found in the permit application. The form shall be placed in the operating record at the end of operating day.

D. Cover

The Permittees shall cover the waste periodically to prevent fires, and control vectors, blowing litter, odor, scavenging, and fugitive dust. Cover with soil or crushed asphalt shall be provided no less than quarterly. When cover is applied, the amount of cover placed and the area receiving cover shall be recorded in the operating record and certified by the operator.

E. Disposal of Liquids

Disposal of containers of liquids larger than household size (five gallons), noncontainerized material containing free liquids, or any waste containing free liquids in containers larger than five gallons is prohibited.

F. Roads

All onsite roads used for transporting waste shall be improved and maintained as necessary to assure safe and reliable all-weather access to the disposal area.

G. Burning of Waste

Intentional burning of solid waste is prohibited and is a violation of UAC R315-303-5(2)(b). Burning of material when meeting the requirements of UAC R307-202-5 is allowed in a segregated area within the landfill site. All accidental fires shall be extinguished as soon as possible.

H. Record Keeping

The Permittees shall maintain and keep on file at the landfill gatehouse an operating record as required by UAC R315-302-2(3). The landfill operator, or other designated personnel, shall date and sign the operating record at the end of each operating day. Each record to be kept shall contain the signature of the appropriate operator or personnel and the date signed. The operating record shall include the following items:

1. The daily operating record shall include the following items:
 - a. The number of loads of waste and the weights or estimates of weights or volume of waste received each day of operation and recorded at the end of each operating day;
 - b. Major deviations from the approved plan of operation recorded at the end of the operating day the deviation occurred;
 - c. Results of other monitoring required by this permit recorded in the operating record on the day of the event or the day the information is received;
 - d. Records of all inspections conducted by the Permittees, results of the inspections, and corrective actions taken shall be recorded in the record on the day of the event;
2. The general record of landfill operations shall include the following items:
 - a. A copy of the permit including the permit application;
 - b. Results of inspections conducted by representatives of the Utah Solid and Hazardous Waste Control Board and/or representatives of the Southeastern Utah District Health Department, when forwarded to the Permittees;
 - c. Closure and Post-closure care plans; and

d. Records of employee training;

I. Reporting

The Permittees shall prepare and submit, to the Executive Secretary, an Annual Report as required in UAC R315-302-2(4). The Annual Report shall include: the period covered by the report, the annual quantity of waste received, an annual update of the financial assurance mechanism, a re-application for approval of the financial assurance mechanism, and all training programs completed.

J. Self Inspections

The Permittees shall inspect the facility to prevent malfunctions and deterioration, operator errors, and discharges which may cause or lead to the release of wastes or contaminated materials to the environment or create a threat to human health. These general inspections shall be completed no less than quarterly and shall cover the following areas: waste placement and cover; fences and access controls; roads; run-on/run-off controls; final and intermediate cover; litter controls; and records. A record of the inspections shall be placed in the daily operating record on the day of the inspection. Areas needing correction, as noted on the inspection report, shall be corrected and the actions taken placed in the daily operating record.

IV. CLOSURE REQUIREMENTS

A. Closure

The Permittees shall close and maintain the facility in accordance with the closure and post-closure plans included in the permit application and as required by R315-305-5(5) UAC.

B. Title Recording

The Permittees shall also meet the requirements of UAC R315-302-2(6) by recording with the Grand County Recorder as part of the record of title that the property has been used as a landfill.

C. Post-Closure Care

Post-closure care at the closed landfill shall be done in accordance with the Post-Closure Care Plan contained in the permit application. Post-closure care shall

continue until all waste disposal sites at the landfill have stabilized and the finding of UAC R315-302-3(7)(c) is made.

D. Financial Assurance

An annual revision of closure costs and financial assurance funding shall be submitted to the Executive Secretary as part of the annual report. The Permittees shall submit the local government financial test and guarantee information as required in UAC R315-309-3(7) and (8) in the annual report required in section III - I of this permit.

V. ADMINISTRATIVE REQUIREMENTS

A. Transfers

This permit may be transferred to a new Permittee by meeting the requirements of the Permit Transfer provision in UAC R315-310-10.

B. Permit Modifications

Modifications to this permit may be made upon application by the Permittees or by the Executive Secretary. The Permittees will be given written notice of any permit modification initiated by the Executive Secretary.

C. Expiration

Application for permit renewal shall be made at least six months prior to the expiration date, as shown on the signature (cover) page of this permit. If a timely renewal application is made and the permit renewal is not complete by the expiration date, this permit will continue in force until renewal is completed or denied.

D. Expansion

1. This permit is for the operation of a Class IVb Landfill according to the design and Operation Plan described and explained in the permit application. Any expansion of the current footprint designated in the description contained in the permit application, but within the property boundaries designated in the permit application, will require submittal of plans and specifications to the Executive Secretary. The plans and specifications must be approved by the Executive Secretary prior to construction.

2. Any expansion of the landfill facility beyond the property boundaries designated in the description contained in the permit application will require submittal of a new permit application in accordance with the requirements of UAC R315-310.
3. Any expansion of the waste accepted at the landfill facility will require submittal of all necessary information to the Executive Secretary and the approval of the Executive Secretary. Acceptance of any waste type not allowed by UAC R315-305-1 will require a new permit application and meeting the requirements of UAC R315-310-3(2).

File Permit #9704R1 Moab Class IV Landfill

APPENDIX B

APPENDIX B
MOAB SOLID WASTE PERMIT MODIFICATION TO INCLUDE
KSUE CORPORATION AS AN OPERATOR



State of Utah

Department of
Environmental
Quality

Dianne R. Nielson, Ph.D.
Executive Director

DIVISION OF SOLID &
HAZARDOUS WASTE
Dennis R. Downs
Director

OLENE S. WALKER
Governor
GAYLE F. McKEACHNIE
Lieutenant Governor

RECEIVED
4/3/04
ja

March 31, 2004

Jane S. Jones, District Manager
Solid Waste Management Special Service District #1
P.O. Box 980
Moab, UT 84532

RE: Moab Class IV Landfill Permit Modification

Dear Ms. Jones:

Enclosed is the solid waste permit modification requested for the Moab Class IV Landfill to include Ksue Corporation as an operator as of April 1, 2004. As a minor modification a public comment period is not required.

If you have questions about the permit modification or other solid waste issues, please contact Phil Burns or Ralph Bohn at (801) 538-6170.

Sincerely,

Dennis R. Downs, Executive Secretary
Utah Solid and Hazardous Waste Control Board

DRD/PEB/kk

Enclosure: Moab Landfill Permit Modification No. 1, Moab Landfill Permit Mod No. 1 Marked

c: David Cunningham, B.S.N., R.N., Health Off/Dept Dir, Southeast Utah Dist Health Dept
David Ariotti, DEQ Southeastern District Engineer

TN200400367
Moab Class IV Landfill

**UTAH SOLID AND HAZARDOUS WASTE CONTROL BOARD
SOLID WASTE PERMIT**

CLASS IV~~1~~ LANDFILL

Pursuant to the provisions of the *Utah Solid and Hazardous Waste Act*, Title 19, Chapter 6, Utah Code Annotated (UCA) 1953, as amended (the Act) and the *Utah Solid Waste Permitting and Management Rules*, Utah Administrative Code (UAC) R315-301 through 320 adopted thereunder,

City of Moab, Utah and Grand County, Utah as owners, and

Solid Waste Special Service District #1 and Ksue Corporation as operators

are hereby authorized to operate the Moab Class IV Landfill located in NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 5 and the E $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, and E $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 6, Township 26 South, Range 22 East, Salt Lake Base and Meridian, Grand County, Utah as shown in the permit application that was determined complete on August 12, 2003.

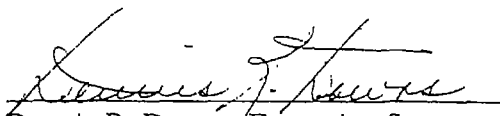
The operation of the landfill is subject to the condition that the Solid Waste Special Service District #1, and the City of Moab and Grand County (Permittees) meet the requirements set forth herein. In accordance with the Utah Solid and Hazardous Waste Act (19-6-103-8(3)(a) UCA), Ksue Corporation is also a Permittee for those areas of operation for which it has responsibility under its contract, effective April 1, 2004, with the Solid Waste Special Service District #1.

All references to UAC R315-301 through 320 are to regulations that are in effect on the date that this permit becomes effective.

Effective date: November 1, 2003.

Expiration date: October 31, 2008.

Signed this 31 day of March, 2004.


Dennis R. Downs, Executive Secretary

Utah Solid and Hazardous Waste Control Board

UTAH SOLID AND HAZARDOUS WASTE CONTROL BOARD
SOLID WASTE PERMIT

CLASS IV~~6~~ LANDFILL

change
marked
Permit
Mod
#1

Pursuant to the provisions of the *Utah Solid and Hazardous Waste Act*, Title 19, Chapter 6, Utah Code Annotated (UCA) 1953, as amended (the Act) and the *Utah Solid Waste Permitting and Management Rules*, Utah Administrative Code (UAC) R315-301 through 320 adopted thereunder,

City of Moab, Utah and Grand County, Utah as owners, and

Solid Waste Special Service District #1 and Ksue Corporation as operators

are hereby authorized to operate the Moab Class IV Landfill located in NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 5 and the E $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, and E $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 6, Township 26 South, Range 22 East, Salt Lake Base and Meridian, Grand County, Utah as shown in the permit application that was determined complete on August 12, 2003.

The operation of the landfill is subject to the condition that the Solid Waste Special Service District #1, and the City of Moab and Grand County (Permittees) meet the requirements set forth herein. In accordance with the Utah Solid and Hazardous Waste Act (19-6-103-8(3)(a) UCA), Ksue Corporation is also a Permittee for those areas of operation for which it has responsibility under its contract, effective April 1, 2004, with the Solid Waste Special Service District #1.

All references to UAC R315-301 through 320 are to regulations that are in effect on the date that this permit becomes effective.

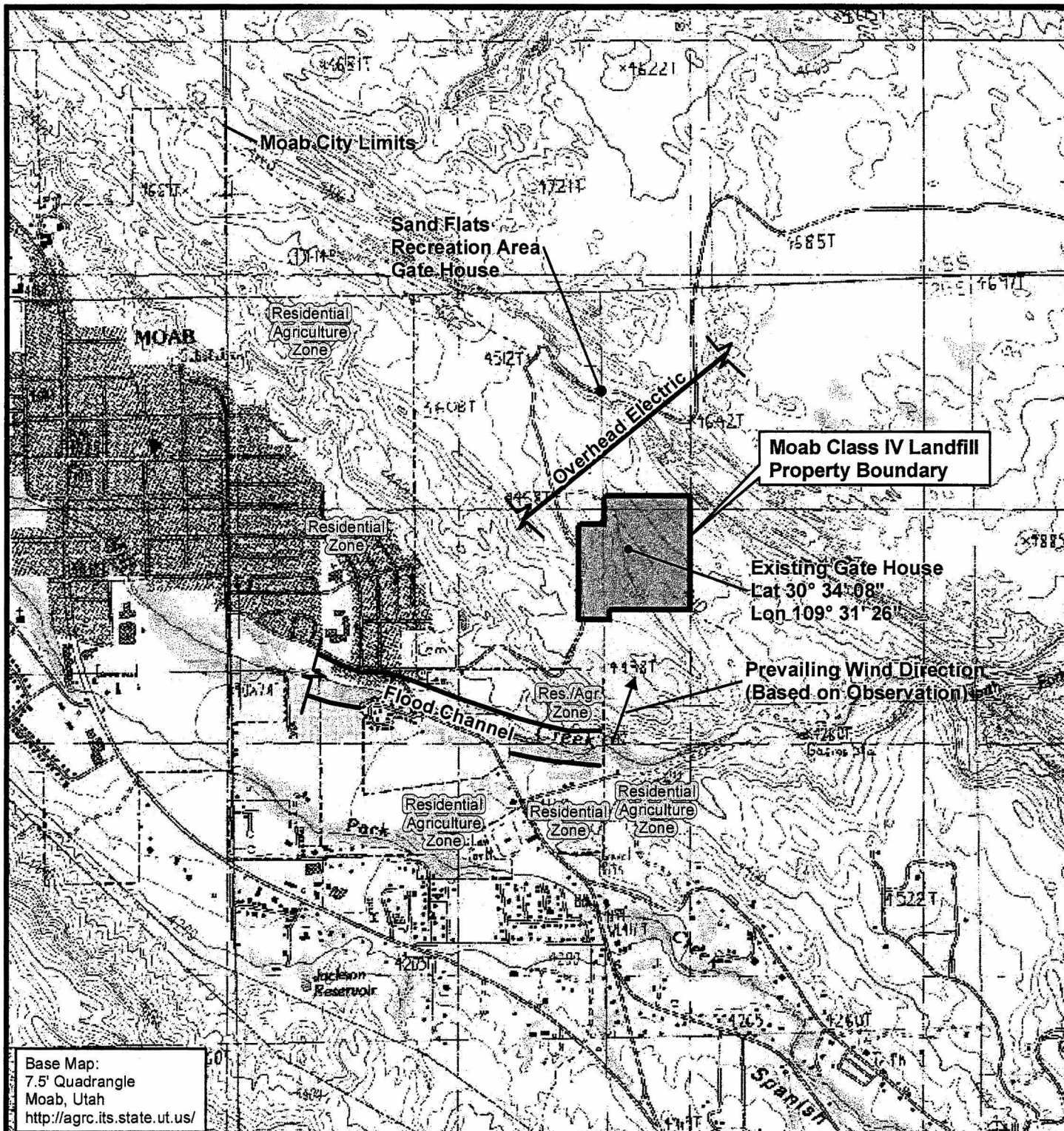
Effective date: November 1, 2003.

Expiration date: October 31, 2008.

Signed this _____ day of _____, 2004.

Dennis R. Downs, Executive Secretary
Utah Solid and Hazardous Waste Control Board

**ATTACHMENT 1
SITE LOCATION MAP**



The information included on this graphic representation has been compiled from a variety of sources and is subject to change without notice. Kleinfelder makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a land survey product nor is it designed or intended as a construction design document. The use or misuse of the information contained on this graphic representation is at the sole risk of the party using or misusing the information.

2,000 1,000 0 2,000
 Feet



KLEINFELDER

849 West Levey Drive - Suite 200
 Salt Lake City, Utah 84123-2964
 Ph. (801) 261-3336 Fax (801) 261-3306
www.kleinfelder.com

SITE LOCATION MAP

MOAB CLASS IV LANDFILL
 1000 E SAND FLATS ROAD
 MOAB, UT

ATTACHMENT

1

**ATTACHMENT 2
EXISTING COUNTOUR MAP**

ATTACHMENT 3
LEGAL DESCRIPTION AND PROOF OF OWNERSHIP

Entry No. 288844 10:30
 Filed 5-29 1959 AM
 Recorded Book 37 Page 59
4.20
Eather Somerville
 Esther Somerville
 Grand County Recorder
 Abs BK PA 1 Sec 5 T26 S R22 E L12
 Abs BK PA 1 Sec 5 T26 S R22 E L12

The United States of America,

To all to whom these presents shall come, Greeting:

WHEREAS, a Certificate of the Land Office at Salt Lake City, Utah, is now deposited in the Bureau of Land Management, whereby it appears that full payment has been made by the City of Moab, Utah, according to the provisions of the Act of Congress of June 14, 1926 (44 Stat. 741; 43 U.S.C. 869), as amended by the Act of June 4, 1954 (68 Stat. 173), for the following described land:

Salt Lake Meridian, Utah.

T. 26 S., R. 22 E.,

Sec. 5, NW1/4;

Sec. 6, E1/2NE1/4SD1, E1/2NE1/4SE1.

The land above described contains 50 acres, according to the Official Plat of the Survey of the said Land, on file in the Bureau of Land Management:

NOW KNOW YE, That the UNITED STATES OF AMERICA, in consideration of the premises, and in conformity with the said Acts of Congress, HAS GIVEN AND GRANTED and by these presents DOES GIVE AND GRANT unto the said City of Moab, Utah, the tract of Land above described, for garbage disposal site purposes only; TO HAVE AND TO HOLD the same, together with all the rights, privileges, immunities, and appurtenances, of whatsoever nature, thereunto belonging, unto the said City of Moab, Utah, and to its successors forever, subject, however, to the following reservations, conditions and limitations:

Subject to any vested and accrued water rights for mining, agricultural, manufacturing, or other purposes, and rights to ditches and reservoirs used in connection with such water rights, as may be recognized and acknowledged by the local customs, laws, and decisions of courts; and there is reserved from the lands hereby granted, a right-of-way thereon for ditches or canals constructed by the authority of the United States.

There is, also, reserved to the United States, all mineral deposits in the land above described, and the right to prospect for, mine, and remove the same under such rules and regulations as the Secretary of the Interior may prescribe.

Provided, that, for a period of twenty-five years from date hereof, if the patentee or its successor attempts to transfer title to or control over the lands to another or the lands are devoted to a use other than that for which the lands were conveyed, without the consent of the Secretary of the Interior or his delegate, or prohibits or restricts, directly or indirectly, or permits its agents, employees, contractors, or subcontractors (including without limitation, lessees, sublessees and permittees), to prohibit or restrict, directly or indirectly, the use of any part of the patented lands or any of the facilities thereon by any person because of such person's race, creed, color, or national origin, title shall revert to the United States. All restrictions, limitations, and conditions, contained in this patent, concerning the use of the land, the transfer of title thereto, the control thereover, and nondiscrimination of the users of the land and facilities thereon, shall cease to be in effect upon the expiration of twenty-five years from the date of this patent.

IN TESTIMONY WHEREOF, the undersigned officer of the Bureau of Land Management, in accordance with section 1 of the act of June 17, 1948 (62 Stat., 476, 43 U. S. C. sec. 15), has, in the name of the United States, caused these letters to be made Patent, and the Seal of the Bureau to be hereunto affixed.

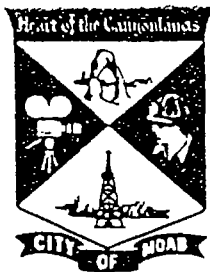
GIVEN under my hand, in the District of Columbia, the
NINTH day of APRIL in the year of
our Lord one thousand nine hundred and FIFTY-EIGHT
and of the Independence of the United States the one hundred and
EIGHTY-SECOND.

For the Director, Bureau of Land Management.

By Rose M. Beall
Chief, Patents Section.

Permit

MAYOR: TOM STOCKS
COUNCIL MEMBERS: JEANNE LAMBLA
WILLIAM D. McDOUGALD
DAN MICK
PAUL SEIBERT
TERRY WARNER
MANAGER: DONNA METZLER
RECORDER: JOHN W. WEST
TREASURER: MARGET SNYDER, CMFA



City of Moab

115 WEST 200 SOUTH
MOAB, UTAH 84532
(801) 259-5121 • FAX (801) 259-4135

POLICE CHIEF:
ALAN WEST (801) 259-8938
PUBLIC WORKS DIRECTOR:
BRENT WILLIAMS (801) 259-7485
WATER & SEWER LEADMAN:
LARRY JOHNSON (801) 259-7485
PARKS LEADMAN:
TIM SHEETS (801) 259-7485
STREETS LEADMAN:
JACOB LYNN ZUFELT (801) 259-7485
COMMUNITY DEV. COORDINATOR:
DAVID OLSEN (801) 259-5129
CITY PLANNER:
ROBERT KATZENSON (801) 259-5129
ZONING ADMINISTRATOR:
DEBBIE GILGER (801) 259-1343

January 15, 1997

Steve Russell
Grand County Law and Justice Center
394 West 4th North
Moab, Utah 84532

Subject: Moab Landfill

Dear Steve:

This letter is to confirm that the Grand County Solid Waste Special Service District has an implied consent from the City of Moab to operate the Moab Landfill on City-owned property. In 1993, upon creation of the Special Service District, the City relinquished its responsibility to manage and operate the Moab Landfill to the District. The City recognizes the jurisdiction and authority of the District to utilize City property for the purposes of operating a Class IV Landfill until such time as closure of the Landfill is complete.

I hope this information is helpful.

Sincerely,

Donna J. Metzler
City Manager

DJM:kh

**ATTACHMENT 4
FINAL CLOSURE PLAN**

SECTION 6

SECTION 5

Grand Co
NE¹/₄ NE¹/₄ SE¹/₄
Sec. 6

Moab City
E¹/₂ SE¹/₄ NE¹/₄ SE¹/₄
Sec. 6

Moab City
E¹/₂ NE¹/₄ SE¹/₄ SE¹/₄
Sec. 6

Moab City
NW¹/₄ SW¹/₄
Sec. 5

Grand Co
SW¹/₄ SW¹/₄
Sec. 5

HDR
HDR Engineering, Inc.
SALT LAKE CITY, UTAH

Issue No.	Description	Date	Drawn	Checked	Reviewed	Project Manager

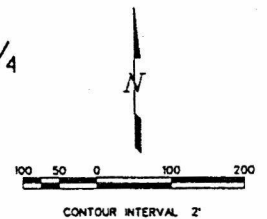
Project Manager	TAC/Process
Architect	Mechanical
Civil	Structural
Electrical	Drawn By
Project Engineer	

Final Closure Plan

Solid Waste Management SSD No. 1

PERMIT DRAWING
NOT FOR CONSTRUCTION

Date	March 1997	Project No.	08456-001-050	Drawing No.	ATT 3	Issue	
Scale		File Name					



ATTACHMENT 5
RANDOM LOAD INSPECTION FORM

Grand County Solid Waste Management
Special Service District #1
1000 E. Sand Flats Road, P. O. Box 980, Moab Utah 84532
Phone 435-259-3867 ~ Fax 435-259-5218

Random Load Inspection – MOAB CLASS IV LANDFILL

Date _____ Landfill Operator _____

License # _____ Driver Name _____

Comments _____

Grand County Solid Waste Management
Special Service District #1
1000 E. Sand Flats Road, P. O. Box 980, Moab Utah 84532
Phone 435-259-3867 ~ Fax 435-259-5218

Random Load Inspection – MOAB CLASS IV LANDFILL

Date _____ Landfill Operator _____

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Comments _____

Grand County Solid Waste Management
Special Service District #1
1000 E. Sand Flats Road, P. O. Box 980, Moab Utah 84532
Phone 435-259-3867 ~ Fax 435-259-5218

Random Load Inspection – MOAB CLASS IV LANDFILL

Date _____ Landfill Operator _____

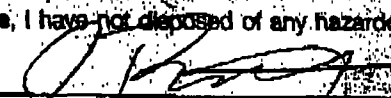
License # _____ Driver Name _____

Comments _____

**ATTACHMENT 6
DAILY LOG SAMPLE**

Solid Waste Management - SSD#1 - Moab Landfill Daily Log

67403

Date	4-15-09	Operator	HT	TOTAL Cu Yds	0.628	TOTAL Fee \$	9.00
Time	12:11	Plate Number	644-124	County	GR	State	UT
Special Residential	<input checked="" type="checkbox"/>	Notes	24x3x1 = 12 = 12 = 241				
Regular	<input checked="" type="checkbox"/>	Tree Trimm					
MLTG Tire Cu. Yd.	<input type="checkbox"/>	Account Name or Number	Q05H				
MLTE Tires Each	<input type="checkbox"/>	To the best of my knowledge, I have not disposed of any hazardous or prohibited waste.					
Waste Type:		Driver's Signature:					
<input checked="" type="checkbox"/> Yard Waste							
<input type="checkbox"/> Constr/Demo Waste							
<input type="checkbox"/> Other							

SAMPLE

ATTACHMENT 7
MONTHLY INSPECTION FORM

Grand County Solid Waste Management Special Service District # 1

7 Mar 2002

Monthly Inspection Checklist

Performed by _____ Date _____

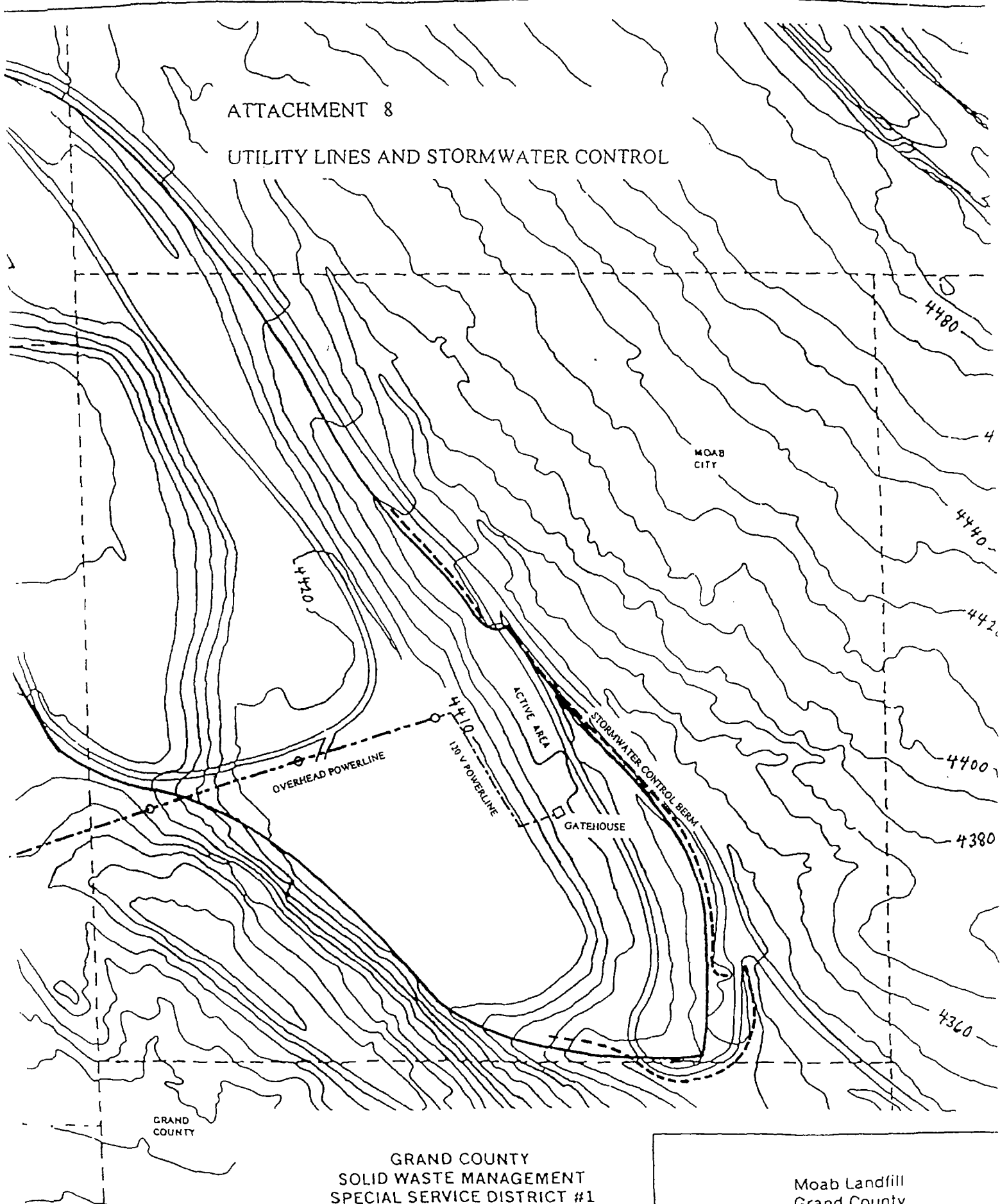
	Moab Class IVb Landfill		Old Moab Landfill (closed)	
	Satisfactory	Needs Work	Satisfactory	Needs Work
1. Tickets and Log-in Procedure				
2. Inspect any waste dumped but not yet covered				
3. Random Load Inspection Done License # _____ Driver _____				
4. Special Wastes/Diversion Areas				
a. Tires				
b. Bulky Items				
c. Animal Carcasses				
d. Metal or Recyclables				
5. Run On Diversion System				
a. Berms/Ditches				
b. Dams/Ponds				
Run Off Control System				
a. Berms/Ditches				
b. Dams/Ponds				
7. Roads				
8. Excavations				
9. Litter and Weed Control				
10. Security				
a. Gates				
b. Fences/Barriers				
11. Safety Equipment				
Fire Extinguishers _____, Radio or Phone _____,				
Ear Plugs _____, Safety Glasses _____, Gloves _____,				
Hard Hat _____, Safety Shoes _____, Overalls or				
Long Sleeve Shirt & Full Length Pants _____				
12. Final Cover/Intermediate Cover				
a. Settling				
b. Vegetation				
c. Final Cover Integrity				

Specify recommended repairs and/or actions taken (by item line #)

ATTACHMENT 8
UTILITY LINES AND STORMWATER CONTROL

ATTACHMENT 8

UTILITY LINES AND STORMWATER CONTROL



GRAND COUNTY
SOLID WASTE MANAGEMENT
SPECIAL SERVICE DISTRICT #1
Box 980 Moab, Utah 84532
(435) 259-3867

Moab Landfill
Grand County
Solid Waste Management SSD No. 1

ATTACHMENT 9
CLOSURE AND POST-CLOSURE CARE COST ESTIMATES

SOLID WASTE SPECIAL SERVICE DISTRICT #1
MOAB CLASS IVb LANDFILL
ESTIMATED CLOSURE COST
Revised for Annual Landfill Report Submitted For 2013

ITEM NO.	ITEM	UNITS	\$/UNIT	QUANTITY	COST
1.0	ENGINEERING				
1.1	Topographic Survey				
1.2	Boundary Survey				
1.3	Site Evaluation				
1.4	Development of Plans				
1.5	Contract Administration, Bidding, and Award				
1.6	Administration Costs for Certification of Final Cover and Affidavit to Public				
1.7	Project Management, Construction Observation, and Testing				
1.8	Monitor Well				
1.9	Other Environmental Permit Costs				
	Subtotal				
	Contingency				
	Total -- Engineering				
2.0	CONSTRUCTION				
2.1	Final Cover System	Sq Yd		10,000	
2.1.1	Completion of Sidewall Liner				
2.1.1a	Soil Placement				
2.1.1b	Soil Processing				
2.1.1c	Soil Amendment				
2.1.1d	Soil Purchase				
2.1.1e	Soil Transportation				
2.1.2	Drainage Layer on Sidewall				
2.1.2a	Geotextile Filter Fabric				
2.1.2b	Geonet/Geotextile Composite				
2.1.2c	Geomembrane Sidewall Liner				
2.2	Completion of Top Cover				
2.2.1	Infiltration Layer				
2.2.1a	Soil Placement	Cu. Yd.	\$8.54	10,000	\$85,424
2.2.1b	Soil Processing				
2.2.1c	Soil Amendment				
2.2.1d	Soil Purchase				
2.2.1e	Soil Transportation				
2.2.2	Flexible Membrane Cover				
2.2.2a	Drainage Layer on Top				
2.2.2b	Sand Layer				
2.2.2c	Geotextile Filter Fabric				
2.2.3	Drainage Layer				
2.2.3a	Geonet/Geotextile				
2.2.3b	Collection Pipe				
2.2.3c	Soil Cover				
2.2.3d	Geonet/Geotextile Composite				
2.2.3e	Gravel Capillary Barrier				
2.3	Erosion Layer Placement				
2.4	Revegetation				
2.4.1	Seeding Included in 2.4				
2.4.2	Fertilizer Included in 2.4				

SOLID WASTE SPECIAL SERVICE DISTRICT #1
MOAB CLASS IVb LANDFILL
ESTIMATED CLOSURE COST
Revised for Annual Landfill Report Submitted For 2013

2.4.3	Mulch Included in 2.4				
2.5	Site Grading and Drainage				
2.6	Site Fencing and Security				
2.7	Leachate Collection System Completion				
2.8	Completion of Gas Monitoring System				
	Subtotal				\$85,424
	Contingency		10%		\$8,542
	Total Construction				\$93,966
3.0	GAS COLLECTION SYSTEM				
3.1	System Design				
3.2	Equipment Installation				
	Subtotal				\$0
	Contingency		10%		\$0
	Total Gas Collection				\$0
4.0	MONITOR WELL INSTALLATION COST				
4.1	Monitoring Well Installation				
4.2	Piezometer and Monitor Well Plugging				
	Subtotal				\$0
	Contingency		10%		\$0
	Total – Ground Water Installation				\$0
	Calculation of Total Closure Costs				
	Total – Engineering				\$0
	Total – Construction				\$93,966
	Total – Gas Collection				\$0
	Total – Monitor Well				\$0
	Performance Bond		2.72%		\$2,556
	Subtotal				\$96,522
	Legal Fees		2.70%		\$2,606
	Total Closure Cost				\$99,128

SOLID WASTE SPECIAL SERVICE DISTRICT #1
MOAB CLASS IV LANDFILL
ESTIMATED POST-CLOSURE CARE COST
Revised for Annual Landfill Report Submitted For 2013

ITEM NO.	ITEM	UNITS	\$/UNIT	QUANTITY	COST
1.0	ENGINEERING				
1.1	Post-Closure Plan				
1.2	Site Inspection and Recordkeeping				
1.3	Correctional Plans and Specifications				
1.4	Site Monitoring (semi-annual)				
1.4.1	Groundwater Monitoring				
1.4.1a	Groundwater Sample Collection				
1.4.1b	Groundwater Sample Analysis				
1.4.1c	Groundwater Sample Analysis and Review				
1.4.1d	Reporting				
1.4.2	Landfill Gas Monitoring	LS	\$138.16	120	\$16,579
1.4.2a	Gas Monitoring Data Collection				
1.4.2b	Gas Monitoring Data Review and Reporting				
2.0	MAINTENANCE COSTS				
2.1	Cover Maintenance Costs	LS	\$350.15	60	\$ 21,009
2.1.1	Soil Replacement				
2.1.2	Vegetation Replacement				
2.2	Equipment Maintenance	LS	\$1,437.53	1	\$ 1,438
2.2.1	Groundwater Well Maintenance and Replacement				
2.2.2	Gas Collection System Operation				
2.2.3	Gas Collection System Maintenance and Repair				
2.2.4	Leachate Collection System Operation				
2.2.5	Leachate Collection System Maintenance and Repair				
3.0	LEACHATE DISPOSAL				
4.0	SITE MAINTENANCE				
4.1	Repair of Surface Water Diversion Structures				
4.2	Repair of Fences and Gates	Day	\$177.45	30	\$ 5,323
4.3	Other Site Maintenance				
	Calculation of Total Post-Closure Care Costs				
	Subtotal				\$ 44,349
	Contingency		10%		\$ 4,435
	Total – Post-Closure Care				\$ 48,784
	TOTAL CLOSURE AND POST-CLOSURE CARE COSTS				
	Total Closure Costs				\$ 99,128
	Total Post-Closure Costs				\$ 48,784
	Total Cost				\$ 147,911.81

ATTACHMENT 10
JOINT RESOLUTION OF FINANCIAL ASSURANCE

City of Moab Resolution #24-98

Grand County Resolution # 2411

GRAND COUNTY, UTAH and MOAB CITY
JOINT RESOLUTION OF FINANCIAL ASSURANCE
OF THE MOAB LANDFILL

WHEREAS, Grand County (the "County") is a county of the State of Utah and, as such, may provide municipal-type services to the residents of unincorporated Grand County;

WHEREAS, the City of Moab (the "City") is a municipal corporation of the State of Utah and, as such, provides municipal-type services to its residents;

WHEREAS, waste generated in unincorporated Grand County and in the City of Moab is delivered to the Moab Landfill, which is owned by the County and the City and operated by Grand County Solid Waste Management Special Service District #1 (the District);

WHEREAS, the Moab Landfill is operated pursuant to a Class IV Landfill Solid Waste Permit (the "Permit") issued by the Utah Solid and Hazardous Waste Control Board (the "Board");

WHEREAS, as a condition of the Permit, the District is required to provide financial assurances regarding closure and post-closure care and corrective action, if required, for the Moab Landfill;

WHEREAS, satisfying financial assurance requirements may be prohibitively expensive to the District, and that expense may be passed on to the residents of the County and the City;

WHEREAS, pursuant to the requirements of Rule 315-309-3(7) entitled "Local Government Financial Test" of the Utah Administrative Code, the County and the City as owners of the Moab Landfill may demonstrate financial assurances up to the current cost estimate for closure and post-closure care and corrective action, if required, thereby facilitating the District's satisfaction of the financial assurance requirements of its Permit and significantly reducing the cost that might be passed on to the residents of the County and the City;

WHEREAS, the current cost estimate for closure and post-closure care and corrective action, if required, for the Moab Landfill is estimated to be \$20,000, and the County and the City each agree to be responsible for up to one-half of the required amount; and

WHEREAS, the County and the City desire to deliver information pertaining to the Local Government Financial Test to the Board through its Executive Secretary to establish financial assurance for the Moab Landfill.

NOW, THEREFORE, be it resolved by Grand County and the City of Moab as follows:

1. The County and the City acknowledge and agree that as owners of the Moab Landfill, they are financially responsible for the costs of providing closure and post-closure care and corrective action, if needed, as required by the Permit.

2. That the County and the City shall demonstrate financial assurance through the Local Government Financial Test to the Board and its Executive Secretary in satisfaction of the District's financial assurance Permit requirements concerning closure and post-closure care and corrective action, if needed, at the Moab Landfill.

3. That the signatures of the Chair of the Grand County Council and of the Mayor of the City of Moab be attested by the appropriate officials of the County and of the City, respectively, before the Resolution is delivered to the Board.

4. That approval of this Resolution was placed upon the agenda of a meeting of the Grand County Council and upon the agenda of a meeting of the Moab City Council prior to action by those bodies and that this Resolution was adopted in compliance with the Utah Open and Public Meetings Act.

5. That this Resolution shall take effect immediately upon its passage.

APPROVED AND PASSED by the Grand County Council and by the Moab City Council on the dates set forth below.

GRAND COUNTY

By: Harvey Merrill
Title: _____
Date: 10-19-98

Attest: Tracy Townsend

CITY OF MOAB

By: Karla R. Hancock
Karla R. Hancock
Mayor
Approved : October 20, 1998

Attest: Rachel Ellison
Rachel Ellison
Moab City Recorder